

Enhancing Transdisciplinary Research through Collaborative Leadership

Barbara Gray

Center for Research in Conflict and Negotiation
Smeal College of Business
Pennsylvania State University

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Transdisciplinarity

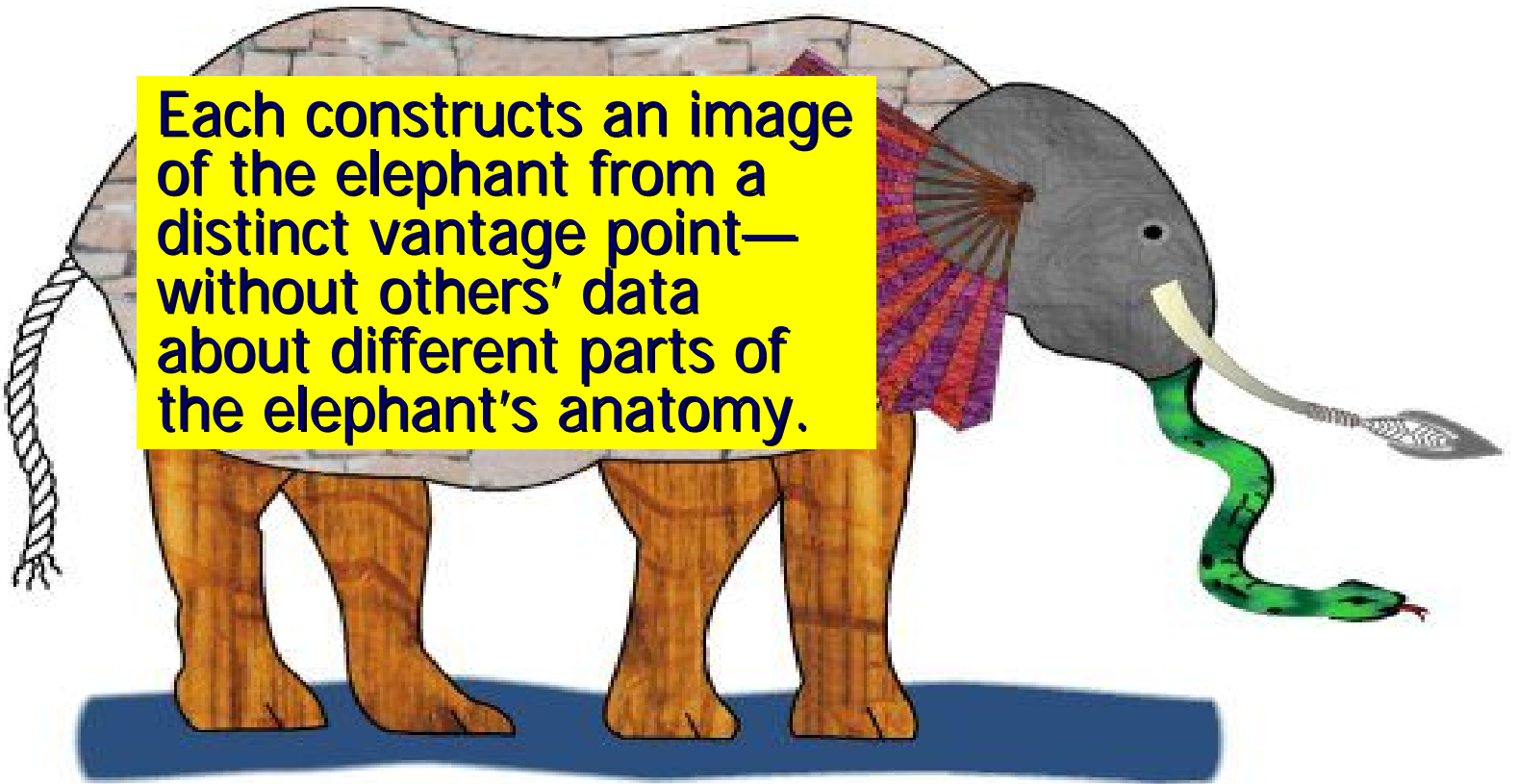
- Cuts “across disciplines, integrating and synthesizing content, theory and methodology from any discipline area which will shed light on the research question/s” (Russell, 2006)
- “Develops methodologies that can be used to re-integrate knowledge” (Somerville & Rapport, 2002)
- Opens all disciplines to that which they share and what lies beyond them (CIRET charter, 1994)

Three Contributions to TD Science

- Review the challenges inherent in working transdisciplinarily
- Outline the critical role of leadership in TD endeavors
- Introduce social network analysis to augment research on TD leadership

Analogy to Blindmen & Elephant

Each constructs an image of the elephant from a distinct vantage point—without others' data about different parts of the elephant's anatomy.



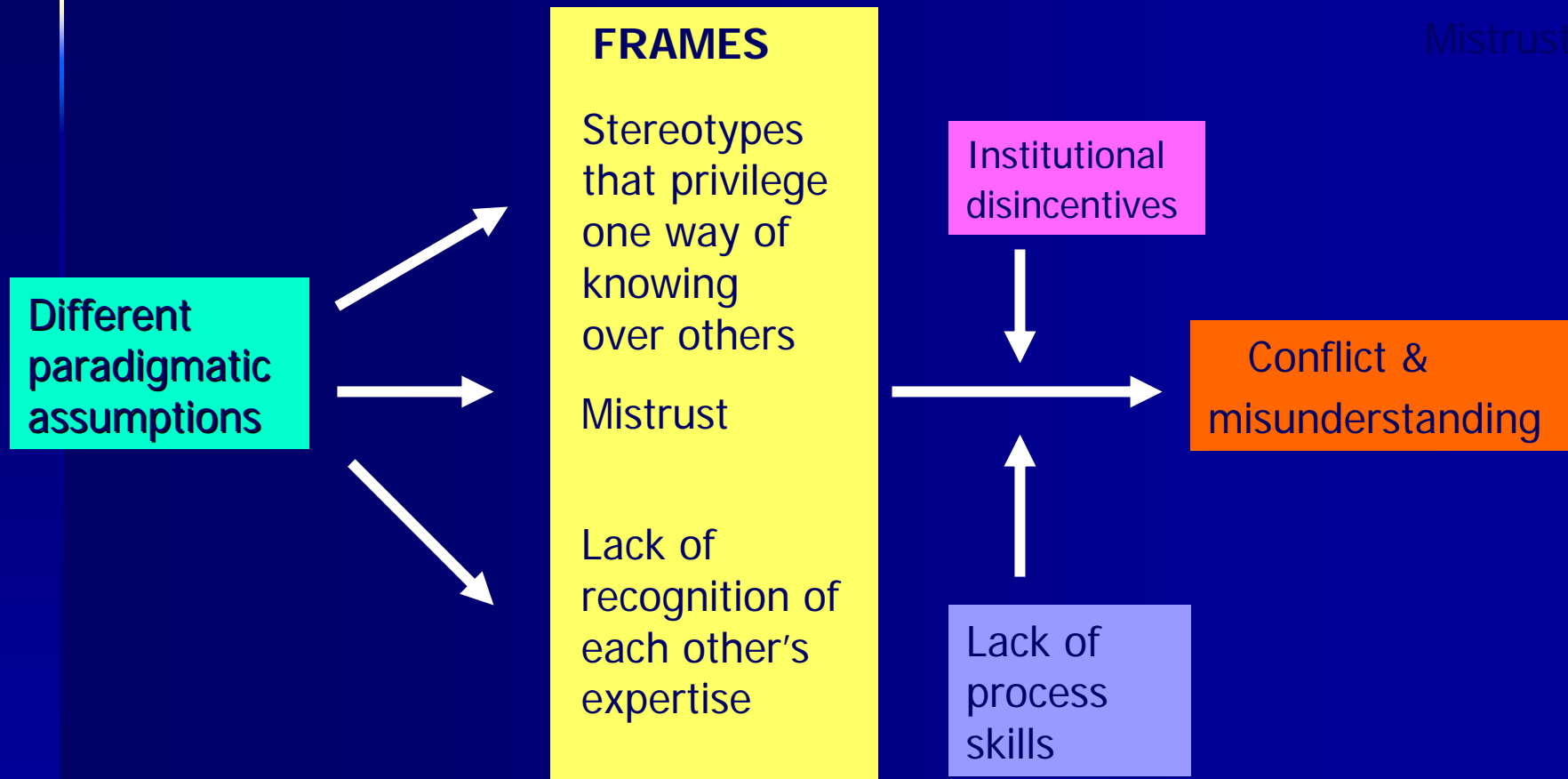
While researchers are not “blind,” leaders of TD teams must...

- Help each team member construct a vision of the whole beyond what their disciplinary spectacles permit
- Knit together individual vantage points into a new coherent whole
- Overcome numerous impediments to achieve successful TD collaboration

“Disciplinary and ideological conflicts (related to academic rigidity on basic concepts and methodologies and protection of one’s own ‘territory’ and customary ‘rewards’) can forestall TD collaborations from the outset.”

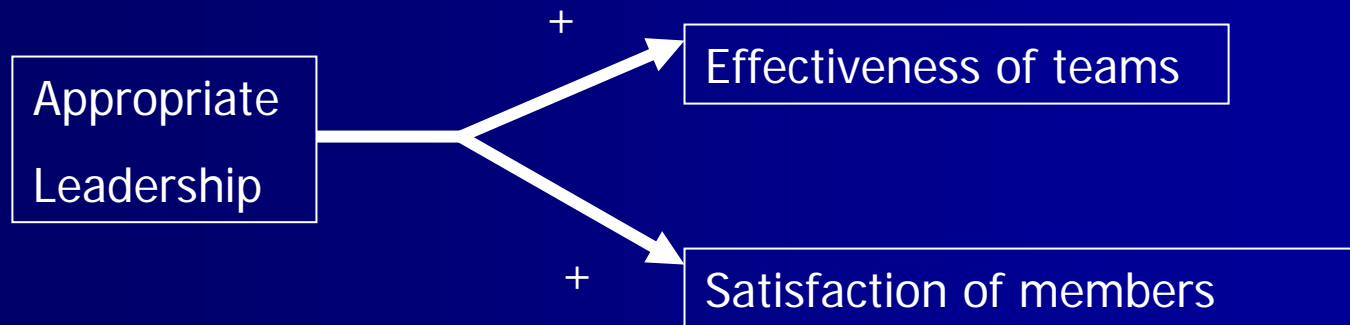
(Young, 2000: 221)

Obstacles to TD Collaboration



Implications for Leadership

- What roles can leaders play to overcome or minimize these classic failures in collaboration and spur innovation and creative problem solving in TD teams?
- OB research has demonstrated that:



Three Critical Tasks of Leaders

■ Cognitive

Involves the management of meaning--Introducing a mental map of desired goals and the methods for getting there

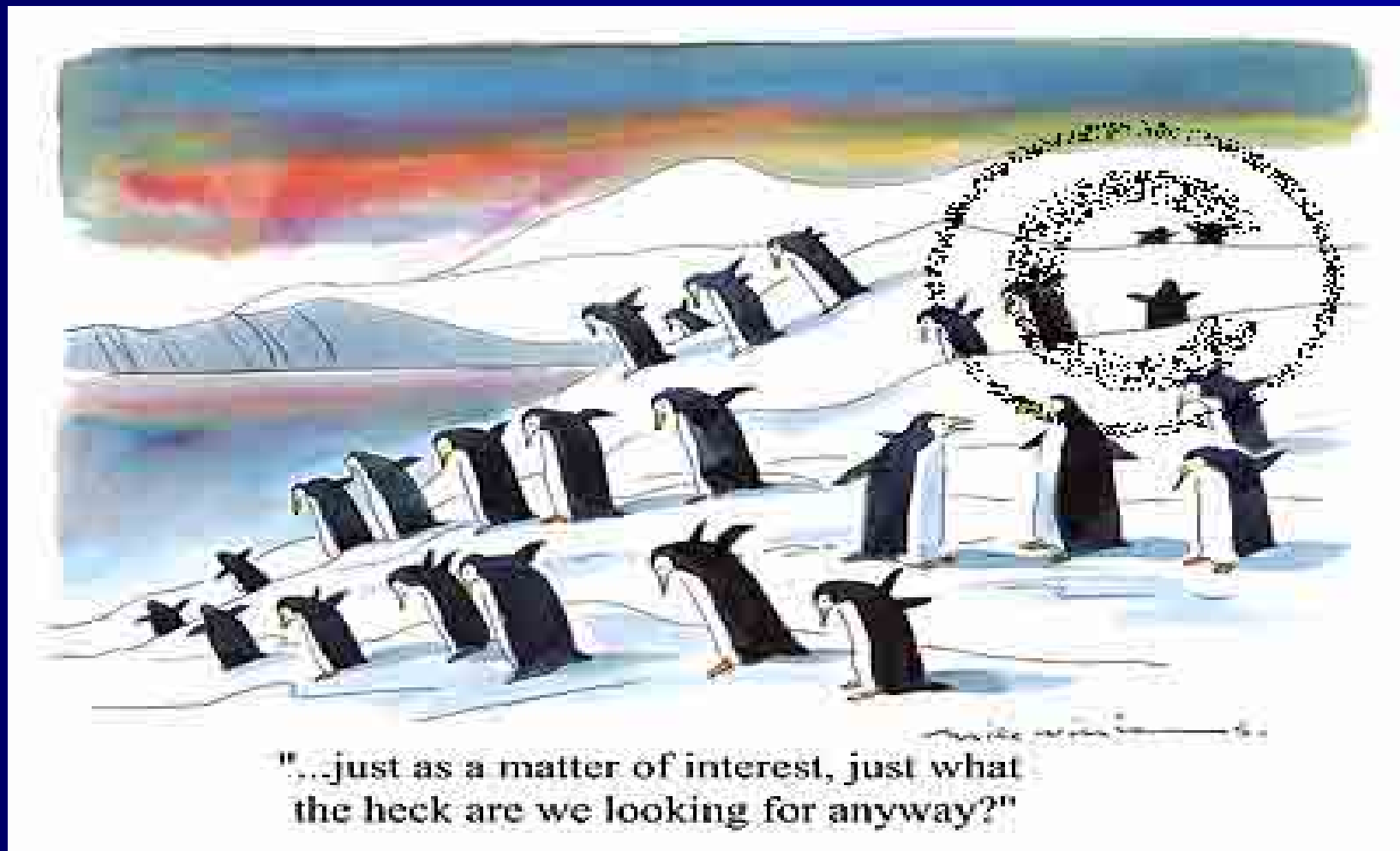
■ Structural

Providing focus and defining objectives; recruiting the necessary expertise; and ensuring the project's accountability (for deadlines, deliverables, etc.)

■ Processual

Improving how TD collaborators interact

Cognitive Tasks: Visioning & Framing



"...just as a matter of interest, just what the heck are we looking for anyway?"

Visioning & Framing

Constructing a
New mental model

"Getting the mind

(Limmerick & Cunningham, 1993)

Community
to unleash creativity
& creativity

Reframing--so that the
unthinkable can become
reality

Epiphanic Vision

Visioning on Two Levels

■ Content level

To conceptualize and inspire the frame shift

■ Process level

One method = Search conference

-- introduces TD members to each others' assumptive frameworks & anticipated trends in each discipline

"... a short, intense, whole system meeting enables something not available in any other way: A gestalt of the whole in all participants that dramatically improves their relationship to their work and their coworkers. "

Weisbord and Janoff (2005, p. 80)

Structural Leadership Tasks

- Address the team's need for coordination and information
- Boundary spanning with external actors (e.g., for institutional commitment and support & to other centers)
- Acquiring funds
- Brokering among within TD teams
 - building linkages & increasing information flow among unrelated parties
 - ameliorating power and status differences among diverse groups
 - serving as *translators* to facilitate alliances across cultural boundaries

Processual Leadership Tasks

- Ensuring that the interactions among team members are constructive and productive
- Designing meetings
- Building of trust among the partners
- Garnering buy-in from team members' institutions
- Mediating conflicts that are likely arise

TD Collaboration as Innovation Networks

(Dhanaraj & Parke, 2006)

- Three critical roles for leaders:
- Managing network stability

Ensuring that the network remains in tact despite member entry & exit

- Managing knowledge mobility

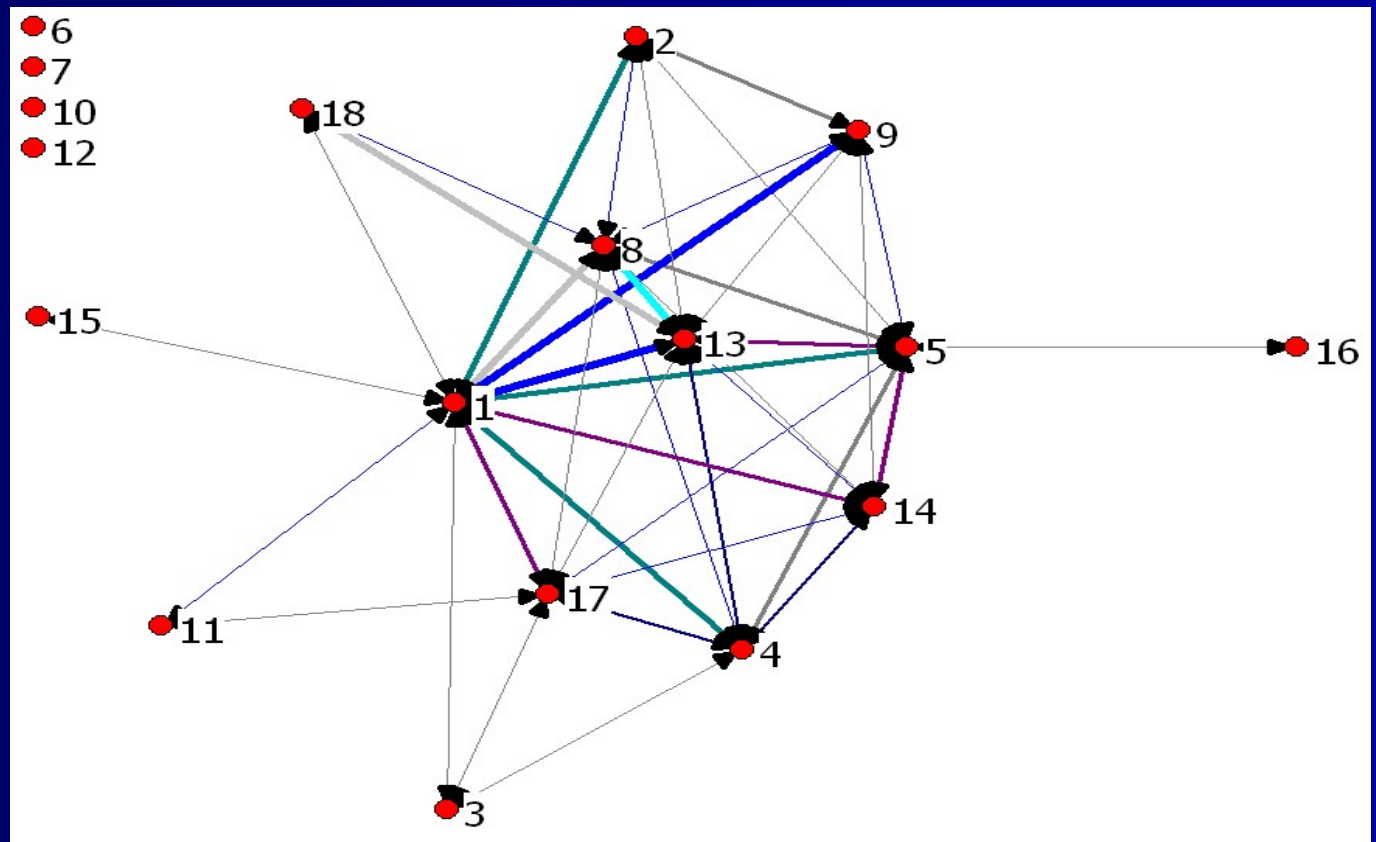
Ensuring that necessary information is transferred among network partners

- Managing innovation appropriability

Allocating/garnering benefits from network activities (e.g., research funds, publications)

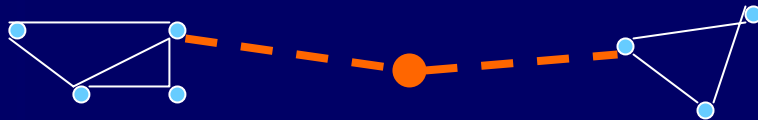
Using Social Network Analysis to Study TD Leadership

- Social network analysis maps the structure of ties among members of a social group



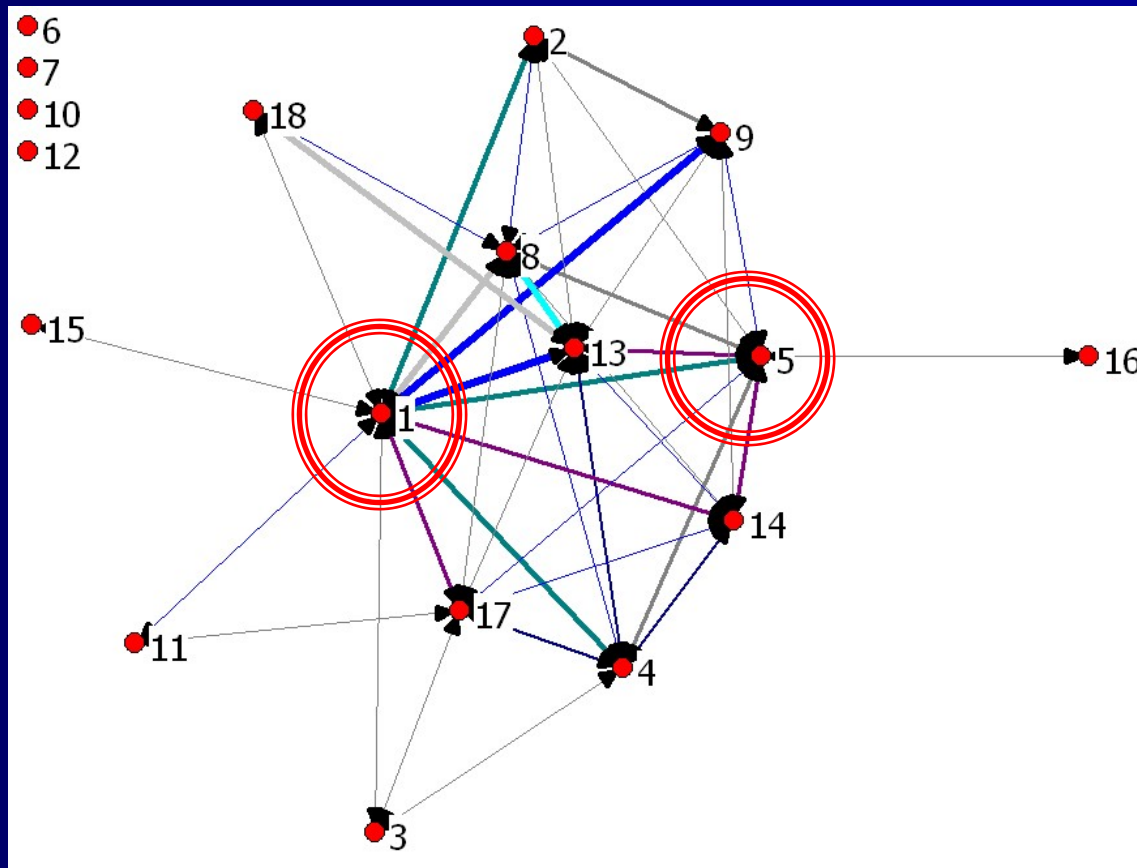
TD Leaders as Brokers

- Connect people not otherwise linked to each other



- See bridges where others see holes
- Bridge structural holes
- Provide “vision advantage” (Burt, 2005):
Import alternative ways of thinking to detect new opportunities
- Brokers are seen as experts by both groups and can play important roles as mediators of conflict (Gray et. al., 2003)

TD Leaders as Brokers



Conclusion

- "Research has strategic value when an observer sees how a finding has implications for what other people see as unrelated theory. A creative spark on which serendipity depends is to see bridges where others see holes."
- Achieving major innovations hinges on whether leaders have the capacity to enable deep diversity while simultaneously forging disciplinary integration.